Annals of "Dunarea de Jos" University of Galati
Fascicle I. Economics and Applied Informatics
Years XXXI – nº3/2025
ISSN-L 1584-0409 ISSN-Online 2344-441X
www.eia.feaa.ugal.ro

DOI https://doi.org/10.35219/eai15840409566

Artificial Intelligence in International Business: A Data-Driven Bibliometric Study

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ARTICLE INFO

Article history:
Received September 29, 2025
Accepted November 22, 2025
Available online December 2025

JEL Classification
O33, F50, C89, D83

Keywords:
artificial intelligence, international business, bibliometric analysis, research trends

ABSTRACT

Artificial intelligence is emerging as a key force in international business, exerting an increasingly influential impact on diplomacy, governance, and cross-border cooperation. As scholarly interest in this area grows, so does the volume of academic literature on the subject. Despite this growth, there is still a limited understanding of how research in this field is structured and how it has evolved. This study uses bibliometric analysis of publications indexed in the Web of Science database to examine the development of research at the intersection of Artificial Intelligence and international business. It identifies the core themes, publication trends, and international collaboration networks that define the field. The findings reveal a significant surge in research output since 2021, accompanied by heightened focus on ethical governance, policy innovation, and interdisciplinary approaches. The data also indicate broader geographic participation, suggesting a shift towards a more globally inclusive research landscape. By mapping these patterns, the study offers a comprehensive overview of the field's trajectory and its increasing relevance in shaping international business thought and practice.

1. Introduction

Artificial intelligence (AI) is rapidly reshaping the global economy and has become one of the most influential technologies of the twenty-first century. Its influence extends across business operations, supply chains, and governance structures, while also redefining how competition and cooperation unfold in international markets. Companies that integrate AI effectively are able to strengthen their strategic position, whereas those that fail to adapt risk losing ground as technological and economic changes accelerate.

During the past decade, AI has shifted from a specialized technological application to a central driver of innovation in business and management. Its adoption has spread across a wide range of industries, including finance, logistics, marketing, and electronic commerce. Large multinational firms now rely on AI systems for strategic decision-making, the assessment of risks, and the management of customer relations. At the same time, governments and regulatory bodies are developing responses to the opportunities and challenges created by the growing use of AI in cross-border business.

Although research on AI has expanded rapidly, there remains limited clarity about how the academic literature in this field has evolved, particularly with respect to international business. Existing studies provide valuable case analyses and theoretical insights. Yet, they remain fragmented and do not offer a comprehensive picture of research trajectories, influential contributors, or the principal themes that define the field.

This article is structured to guide readers through a systematic analysis of AI applications in the context of international business. It begins with an introduction that defines AI, explores its conceptual evolution and outlines its relevance within business environments, along with the main research objectives.

The literature review provides a synthesis of existing studies on AI implementation in international business. The methodology section details the use of bibliometric analysis, employing the VOSviewer tool to extract, visualise and interpret data from The Web of Science Core Collection. The results and discussion sections present the main findings, including emerging research trends, bibliometric coupling and countries that have made significant contributions to the field. Finally, the conclusion section summarises the study's contributions and offers suggestions for future research, particularly in emerging areas such as ethical AI and interdisciplinary collaboration.

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2. Literature review

The integration of AI into international business has emerged as a central topic of research in recent years. Scholars increasingly describe AI not only as a technological tool but as a transformative force that reshapes competitiveness, decision-making, and governance in cross-border contexts (Patra *et al.*, 2024) . This growing recognition has led to a steady increase in publications examining how AI influences organizational strategies, global markets, and international regulation. Bibliometric analyses have been particularly useful in providing a structured understanding of this evolving field. A study by Patra *et al.* (2024) compared publications indexed in the Web of Science and Scopus databases to trace patterns of AI research in business management. Their findings reveal a marked growth in research output after 2015 and highlight several clusters of work concerned with technology adoption, strategy, and ethical challenges. They also noted that while the research is expanding globally, a few countries such as China, the United States, and the United Kingdom continue to lead in terms of volume and academic influence.

In the area of electronic commerce, the contribution of AI has been especially pronounced. Bawack *et al.* (2022) conducted a large-scale bibliometric study of over four thousand publications and found that AI applications are concentrated in fields such as recommender systems, personalization, optimization, and trust. Their analysis also emphasized the importance of consumer sentiment and how AI is shaping customer experiences across borders. These insights reflect the increasing reliance of multinational companies on AI-driven systems to adapt their services to diverse international markets.

Researchers have also turned their attention to questions of responsibility and governance. Tani *et al.* (2025) carried out a bibliometric review of literature on responsible AI in management contexts, showing that issues of bias, transparency, and accountability have become central. These concerns are especially relevant in international business, where firms must adapt to varying legal and cultural expectations. The growing prominence of responsible AI suggests that the field is not only about technological capability but also about social legitimacy and trust.

At a more general level, De La Vega Hernández (2023) produced a global bibliometric mapping of AI research from 1990 to 2019. Their study provides a broad overview of how AI has developed as a research area, showing both disciplinary diversification and geographical expansion. They describe AI as an inherently interdisciplinary domain, bringing together work from computer science, management, economics, and policy studies. This breadth mirrors the wide-ranging impact of AI on international business, where firms increasingly rely on knowledge that crosses disciplinary boundaries.

The financial sector provides further examples of AI's impact on international business. Kedelić et al. (2023) reviewed the use of machine learning approaches such as neural networks and support vector machines in entrepreneurial finance. They concluded that AI is becoming central to assessing risk and opportunity in global entrepreneurship. Similarly, Kanaparthi (2024) examined the role of AI and machine learning in financial technologies and services. This study highlighted contributions in predictive analytics, fraud detection, and customer engagement, demonstrating how AI supports financial firms in building resilience in international markets.

Taken together, these studies show that research on AI in international business has grown rapidly in both scope and volume. The literature reveals an increasingly diverse set of themes ranging from commerce and finance to governance and ethics. Although research remains concentrated in a small group of countries, new contributors from other regions are gradually entering the conversation. The emphasis on responsibility, interdisciplinary collaboration, and governance reflects the complexity of AI's role in shaping global business. However, important gaps remain. Few studies explicitly connect AI to sustainability, cross-cultural management, or regulatory diversity. Addressing these gaps would enrich the field by linking technological development with broader institutional and societal contexts.

3. Problem statement

As AI becomes increasingly embedded in international business operations, academic interest in its global implications continues to grow. It is the considered opinion of numerous experts in the field that AI will have a significant influence on decision-making processes, cross-border strategy, and economic competitiveness. In response to this challenge, scholars are investigating how AI is transforming international business practices and reshaping global market dynamics.

This rising interest is closely aligned with broader concerns surrounding digital innovation, ethics, and governance in the global economy. Consequently, recent studies have adopted bibliometric analysis to evaluate the development of this research field, examining key concepts, influential authors, and thematic trends across major academic databases. The following table provides a summary of these findings.

Table 1. Existing bibliometric analysis on AI in international business

Authors	Year	Time frame	No. of articles included	Database	Terms
Hiranya Dissanayake, Otilia Manta, Anuradha Iddagoda, Maria Palazzo	2024	1977-2024	3847	SCOPUS	artificial intelligence, machine learning, big data, deep learning, internet of things
Mihaela Belu	2024	2000-2024	363	SCOPUS	international trade, artificial intelligence, Decision support systems, Competition, learning systems
Alexandru Constantin Ciobanu, Gabriela Meşniţă	2021	1972-2022	2000	SCOPUS	data security and privacy, economic and social impact, automations and robots and human beings
Mario Tani, Valerio Muto, Gianpaolo Basile, Giulia Nev	2025	2016-2024	102	WoS and SCOPUS	Artificial intelligence, Ethics, AI ethics, Human resource management, Data
Mihaela Belu, Ana Maria Marinoiu	2025	2010-2024	400	SCOPUS	supply chain management, artificial intelligence, supply chains, decision support systems, sustainable development
Mădălina Mazăre, Cosmin Dobrin, Cătălin Alexandru Verdeş, Alexandra Andreea Mironescu	2024	2022-2024	121.089	WoS	transparency, decision-making, ChatGPT, human, education
Anna Vorontsova, Svitlana Tarasenko, Wojciech Duranowski, Arkadiusz Durasiewicz, John Soss, Artem Bilovol	2025	1986-2024	234	WoS, SCOPUS	Artificial Intelligence, Deep Learning, Machine Learning, Robot, Internet of Things
Güler Koştı, İsmail Kayadibi	2025	2020-2024	522	Web of Science, Scopus, PubMed, and Google Scholar	human resource management, natural language processing, recruitment and selection, analytics, algorithmic management,
Ashok Kumar Patra, Ashyashree Praharaj, Desul Sudarshan, Biswajit Prasad Chhatoi	2024	2013-2022	1300	SCOPUS, WoS	Machine learning, neural networks, and blockchain, 'sustainable development, accounting
Jorge Campoverde Campoverde, Doménica Heras Tigre, Katherine Coronel-Pangol	2024	1991-2023	7937	WoS	Marketing, Artificial Intelligence, Big Data and Internet of Things

Source: Web of Science statistical data (Authors' computation)

4. Aim of the research/ Research questions

This paper aims to answer the following question: What are the main research trends, themes, and contributions associated with the intersection of AI and global affairs in specialised literature?

The main objective is to identify the key sources, influential authors, and dominant topics within this interdisciplinary field. Scientific mapping techniques will be applied to analyse the conceptual structure based on the number of publications over time, the most frequently used keywords by authors, and the countries and institutions contributing to the field. This analysis will be conducted using data extracted from an international academic database.

5. Research methodology

In this paper, we conducted a bibliometric analysis to examine the existing specialised literature at the intersection of AI and global affairs. The aim is to understand how this interdisciplinary topic has evolved, identifying the most relevant themes, influential contributors and collaboration patterns.

Our research methodology consisted of several key steps: selecting and collecting data, conducting a bibliometric analysis using VOSviewer software, and mapping and building thematic networks. Co-occurrence analysis of keywords, construction of term maps and visualisation of the knowledge structure were carried out using publications retrieved from the Web of Science Core Collection database.

A total of 351 scientific publications on AI in global affairs were selected, focusing on the time frame of 2015–2025. The dataset includes articles indexed under relevant categories, such as international relations, political science, economics, and computer science. The search was limited to peer-reviewed publications, and only articles written in English were included.

Bibliometric analysis, which originated in the 1960s, offers an objective method of examining a research domain, tracking its development and identifying potential areas for collaboration. As a quantitative and transparent approach, it captures various metadata elements, such as titles, author affiliations, publication years, journals, citations, and keywords. This enables researchers to monitor the growth of interest in a field over time and observe shifts in its structure.

Bibliometric analysis is a systematic method for examining scientific literature to uncover patterns, trends, and impact in a specific field. It involves gathering data from academic databases, refining it, and applying analytical techniques to draw insights. This approach is increasingly used in research due to its effectiveness in handling large datasets (Passas, 2024).

Using this methodology, we aim to provide a comprehensive overview of the discussion and analysis of AI within the field of global affairs. The findings help to identify key contributions and current research gaps, providing a basis for future studies and international policy discourse.

6. Results and discussions

The chart below shows a growing interest in AI-related research in both the business and economics sectors between 2015 and 2025. Publications were minimal before 2021, but a sharp rise began afterward, especially in the business sector, which peaked with 19 documents in 2024. The economics sector shows steady growth, with its highest outputs in 2023 and 2025. Overall, the data highlights a recent surge in scholarly attention, with the business field leading in publication volume.

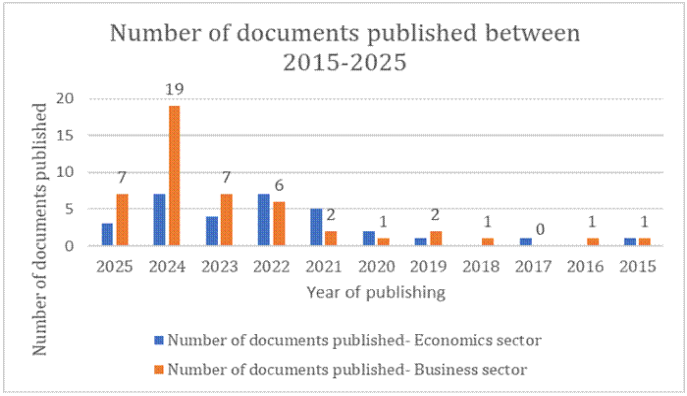

Figure 1. Number of papers published per year in the Economics and Business sector from 2015 to 2025

Source: Web of Science statistical data (Authors' computation)

The co-occurrence map generated using VOSviewer provides a structured overview of the terms most frequently associated with AI in the context of international business literature. At the centre of this visualisation is the term 'artificial intelligence', indicating its dominant presence and centrality in current academic discourse. Terms closely connected to it, such as 'model', 'systems', 'knowledge', 'business' and 'analytics', reflect the methodological and operational frameworks through which AI is studied in this field.

Several thematic clusters emerge, each signalling distinct yet interrelated areas of research. One prominent area focuses on governance, strategies, and decision-making, emphasising the role of AI in policy support, organisational leadership, and public-sector applications. Another dense grouping of terms such as 'interoperability', 'integration', 'prediction', and 'automation' emphasises the technical and computational aspects that characterise AI implementation in global business environments. Terms such as 'market', 'firm', 'bankruptcy prediction', and 'international entrepreneurship' reflect the relevance of AI tools in assessing financial risk, guiding business strategies, and exploring new markets.

The map also reveals a growing interest in societal and ethical concerns, as seen in terms such as 'business and human rights', 'civil society', and 'climate change'. These associations suggest that AI is being examined through an increasingly broad lens, not only as a tool for efficiency, but also as a driver of responsible innovation. On the periphery are niche topics such as 'biomass', 'chronic disease management', and 'football', showing that AI research is branching into sector-specific applications beyond traditional business concerns.

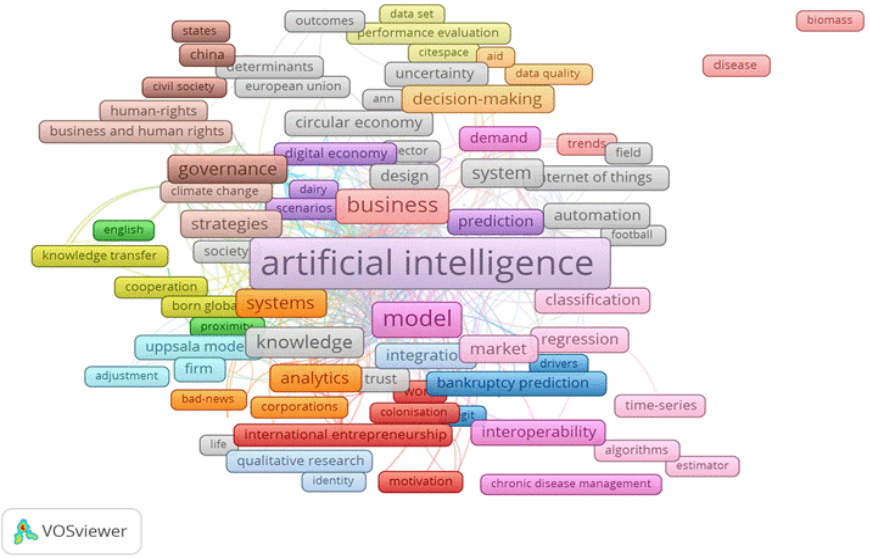

Figure 2. Overlay visualization of keywords
Source: Map created in VOSviewer (Authors' computation)

The co-authorship network map illustrates the collaboration between countries on AI research in the context of global affairs, as seen in Figure 3. China, the United States, England and Germany are the most active contributors, forming strong connections with many other nations. Clear regional clusters emerge, for instance, China collaborates closely with Japan, Malaysia, and India, while France frequently partners with Portugal and Morocco. Conversely, countries such as the Czech Republic and Kuwait are positioned on the edges of the network, suggesting that they are less involved in international research partnerships. Overall, the map highlights the leading role of a few countries, as well as the need to encourage more inclusive global cooperation in this field.

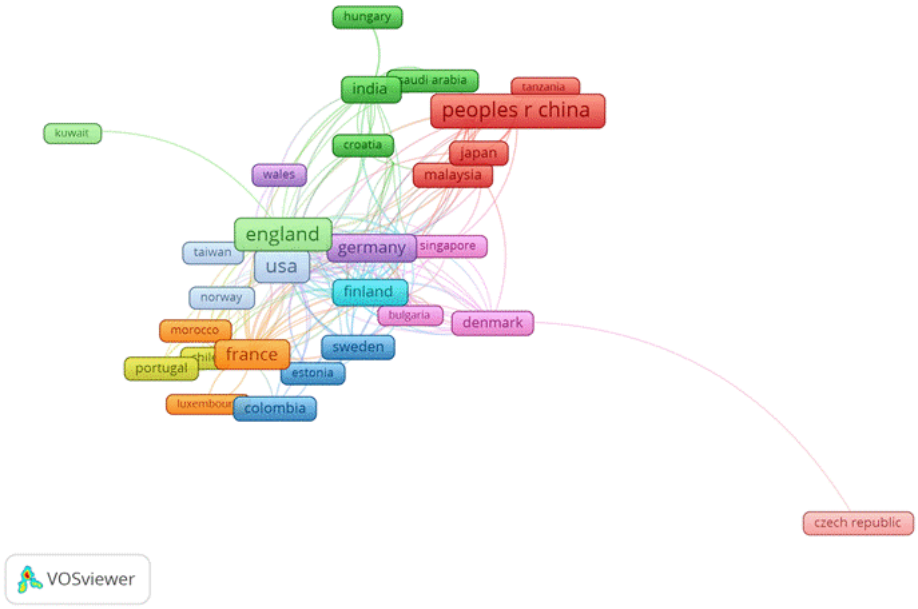

Figure 3. Countries of origin of the authors of the publications
Source: Map created in VOSviewer (Authors' computation)

Moreover, we also noticed which are the most cited works from the specialized literature in the articles analyzed by us, respectively who are the authors of these articles.

Table 3. The most cited works from the specialized literature (Economics and Business sector)

Authors	Paper title	Journal	Year	Number of citations
Feliciano-Cestero et al	Is digital transformation threatened? A systematic literature review of the factors influencing firms' digital transformation and internationalization	Journal of Business Research	2023	176
Cuypers, IRP (Cuypers, Ilya R. P.) et. al	Transaction cost theory: past progress, current challenges, and suggestions for the future	Academy of Management Annals	2021	159
Bojer, CS (Bojer, Casper Solheim)	Kaggle forecasting competitions: An overlooked learning opportunity	International Journal of Forecasting	2021	147
Döpke, J (Doepke, Joerg)	Predicting recessions with boosted regression trees	International Journal of Forecasting	2017	72
Makridakis, S (Makridakis, Spyros)	The M5 competition: Background, organization, and implementation	International Journal of Forecasting	2022	71

7. Conclusions

This study provides a structured overview of how AI is approached within the context of international business. The analysis draws on a sample of 351 relevant publications spanning the years 2015 to 2025, and the results are presented in the form of a ranking analysis and an overlay visualization of keywords. The data and visual outputs offer a comprehensive picture of the field's evolution, identifying both dominant research themes and future areas of interest.

When compared with existing literature reviews, our results both confirm and extend earlier findings. Previous studies, such as those by Patra et al. (2024) and Bawack et al. (2022), emphasized the central role of the United States and China in shaping academic research on AI and business. Our study supports these conclusions but also highlights the strong role of European countries, particularly Germany, France, and the Netherlands, which appear more prominently in our analysis. Furthermore, while earlier reviews tended to stress the dominance of advanced economies, our findings underline a gradual diversification of contributions from emerging regions. This suggests that the research landscape is broadening, making the global conversation on AI in business more inclusive than previously acknowledged.

Our analysis reveals that concepts such as automation, analytics, decision-making, and global competitiveness are core themes in recent academic publications. These findings reflect the expanding role of AI not only as a technological advancement but also as a strategic instrument that is reshaping business operations and international market behaviour. The analysis also shows a clear trend towards interdisciplinary research, incorporating insights from economics, management and information systems.

At the country level, developed economies, such as the United States, the United Kingdom and China demonstrate clear leadership in terms of publication volume and academic influence. Looking at Europe, countries such as Germany, France, and the Netherlands are particularly well-known for their contributions to AI research with respect to international business. Although emerging economies have a smaller research contribution, a rising participation was observed from countries in Eastern Europe and Southeast Asia.

The keyword analysis shows a shift in focus towards ethical concerns, AI governance and cross-border regulatory challenges, suggesting these will become more prominent in future research. Despite the transformative role of AI in international business, bibliometric findings suggest limited integrated studies of AI and sustainability, corporate diplomacy and ethical frameworks.

To support the identification of future research directions, the analysis should comprise a more detailed literature review of recent high-impact studies from more than one database. Attention should be given to exploring cross-disciplinary methods, regional perspectives and the institutional implications of AI adoption in global business environments. Such effort would help fill the current gaps and would ensure a more holistic understanding of AI's impact on the international business landscape.

Acknowledgements

We would like to express our sincere gratitude to the Doctoral School of International Business and Economics and the Doctoral School of Business Administration for their valuable support and guidance throughout this research. Their academic environment and resources have greatly contributed to the development of this study.

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